

Listing of Claims:

Please make the following amendments to the specification (material to be inserted in replacement paragraphs or sections is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[]]).

1. (Original) A compound having the formula

$T-P-M-L$

where T is a labeled species;

M is a metal ion;

P is a peptide or protein that binds the metal ion; and

L is a luminescent label.

2. (Original) The compound of claim 1, where T is an amino acid, a peptide, a protein, a polysaccharide, a nucleotide, an oligonucleotide, a nucleic acid polymer.

3. (Original) The compound of claim 1, where T is a drug, a lipid, a lipid assembly, a non-biological organic polymer, or a polymeric microparticle.

4. (Original) The compound of claim 1, where T is a peptide, protein, polysaccharide, nucleotide, oligonucleotide, or nucleic acid polymer.

5. (Original) The compound of claim 1, where L comprises a luminophore that is covalently bound to the metal ion.

6. (Original) The compound of claim 5, where L comprises a Eu^{3+} or a Tb^{3+} ion.

7. (Original) The compound of claim 5, where the luminophore is a fluorophore.

8. (Original) The compound of claim 7, where the fluorophore is a xanthene dye.

9. (Original) The compound of claim 8, where the xanthene dye is a fluorescein, a rosamine, a rhodamine, or a rhodol.

10. (Original) The compound of claim 7, where the fluorophore is a benzimidazole, a phenoxazine, an ethidium, a propidium, an acridine, a styryl dye, a carbocyanine, a merocyanines, a coumarin, a pyrene, a chrysene, a stilbene, a carbazine, an anthracene, a naphthalene, a dipyrrometheneboron difluoride, or a dibenzodipyrrometheneboron difluoride.

11. (Original) The compound of claim 1, where P includes a peptide sequence that incorporates multiple histidine residues and M is a Ni^{2+} ion.

12. (Original) The compound of claim 1, where P includes a phosphorylated peptide sequence and M is a Ga^{3+} or a Fe^{3+} ion.

13-15. (Canceled)

16. (Original) The compound of claim 1, where P is chemically conjugated to T.

17-41. (Canceled)

42. (Original) A kit, comprising a compound having the formula

T-P-M-L

where T is a labeled species;

M is a metal ion;

P is a peptide or protein that binds the metal ion; and

L is a luminescent label.

43. (Original) The kit of claim 41, further comprising at least one additional reagent.

44. (Original) The kit of claim 42, wherein the additional reagent is a buffering agent, a luminescence calibration standard, an enzyme, an enzyme substrate, a nucleic acid stain, or a labeled antibody.

45. (Original) The kit of claim 41, wherein the kit is configured for use in conjunction with a sample in a multiwell microplate or a microfluidic chip.